

PAKHOMOV, B.P.; TIKHONOVICH, V.I.

Effect of the speed of growth of pulsation loading on the wear
resistance of high strength cast iron. Struk.i svois.lit.splav.
no.1:142-147 '62. (MIRA 15:5)

(Cast iron - Testing)

(Mechanical wear)

TIKHONOVICH, V.I.

A new standard for wooden doors of residential and public buildings.
Der. prom. 13 no.8:26 Ag '64.

(MIRA 17:11)

TIKHONOVICH, V.I.; PAKHOMOV, B.P.

Wear resistance of piston rings from high-strength cast
iron. Trakt. i sel'khoz mash. 33 no.10:14-16 0 '63.

1. AN UkrSSR.

(MIRA 17:1)

TIKHONOVICH, V.I., arkhitektor

Window and door units from plastics. Stroi. mat. 10 no. 11:3-4
N '64. (MIRA 18:1)

TIKHONOVICH, V.I.; MARKOVSKIY, Ye.A.; PAKHOMOV, B.P.

Wear-in characteristics of high strength cast iron. Struk.i svois.
lit.splav. no.1:148-151 '62. (MIRA 15:5)
(Cast iron—Testing) (Mechanical wear)

MARKOVSKIY, Yevgeniy Adamovich, kand.tekhn. nauk; TIKHONOVICH,
Vladimir Ivanovich, kand. tekhn. nauk; TYNNIY, A.D., kand.
tekhn. nauk, retsenzent

[Radioactive testing of the wear of parts of internal
combustion engines] Radioaktivnyi kontrol iznosa detalei
dvigatelei vnutrennego sgoraniia. Kiev, Tekhnika, 1965.
74 p. (MIRA 18:10)

L 27300-66 EWT(m)/T DIAAP DJ

ACC NR: AM6000750

Monograph

34 UR/
33
B+1

Markovskiy, YEvgeniy Adamovich (Candidate of Technical Sciences); Tikhonovich, Vadim
Ivanovich (Candidate of Technical Sciences)

Radioactive wear control of parts of an internal combustion engine (Radioaktivnyy
kontrol' iznosa detaley dvigateley vnutrennego sgoraniya) Kiev, Izd-vo "Tekhnika,"

TOPIC TAGS: wear resistance, internal combustion engine component, autoradiography,
radioisotope

PURPOSE AND COVERAGE: This booklet is intended for technical-engineering and
scientific personnel engaged in the study of the useful life of internal combustion
engine parts. It is concerned with the wear of engine parts under varying operating
conditions and contains information on the use of radioactive isotopes for
determining the extent of the wear. Possibilities of accelerating an engine without
increasing the wear of its parts are shown.

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Operating conditions of internal combustion engines and the useful life of their
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Installations and devices for determining wear resistance of engine parts under
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UDC: 621.43:546.79

L 27300-66

ACC NR: AM6000750

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SUB CODE: 13/ SUBM DATE: 14Jun65/ ORIG REF: 030/ OTH REF: 006

Card 2/2 *CV*

TIKHONOVICH, V. Ya.

"A System of Working Cleared Fallow Ground on the Chernozem Soils of the Sumskeya Oblast." Cand Agr Sci, Belorussian Order of Labor Red Banner Agricultural Academy, Min Higher Education USSR, Gor'kiy, 1954. (KL, No 12, Mar 55)

SO: Sum No. 670, 29 Sep 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

BRAUN, M.P.; TIKHONOVSKAYA, L.D.

Method of intersecting planes in the study of deformation
distribution in the E1726 steels. Zav.lab. 27 no.8:984-986
'61. (MIRA 14:7)

1. Institut liteynogo proizvodstva AN USSR.
(Steel--Testing) (Deformations (Mechanics))

TIKHONOVSKAYA, L.D.; MATYUSHENKO, N.I.; BRAUN, M.P.

Effect of cerium and boron inoculation on the structure of cast
austenitic steel. Struk.i svois.lit.splav. no.1:54-59 '62.

(Steel, Heat-resistant--Metallography) (Cerium) (Boron) (MIRA 15:5)

BRAUN, M.P.; TIKHONOVSKAYA, L.D.; MATYUSHENKO, N.I.

Effect of cerium and boron on the structure of cast austenitic steel.
Issl. po zharoproch. splav. 10:207-214 '63. (MIRA 17:2)

AMS 19742

Structure of heat-resistant modified steel, as related to hot deformation and heat treatment.

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L 63995-65

AM5019748

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SUB CODE: MM

SUBMITTED: 05Apr65

NO REF SOV: 069

OTHER: 007

Card 3/3

L 02370-67 ENT(m)/T/EWP(t)/ETI LJP(c) JD/JG

ACC NR: AP6032197

SOURCE CODE: UR/0418/66/000/005/0081/0082

AUTHOR: Braun, M. P. (Doctor of technical sciences); Tikhonovskaya, L. D. (Engineer);
Khil'chevskaya, T. V. (Engineer)

ORG: none

TITLE: Investigation of the modifying effect of lithium on cast austenitic steel

SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 5, 1966, 81-82

TOPIC TAGS: GRAIN SIZE, LITHIUM, austenitic steel, cast ~~austenitic~~ steel, lithium containing alloy, metal property/EI695 steel

AUSTENITIC
ABSTRACT: An attempt has been made to introduce lithium as a modifier into molten EI695 austenitic steel heated to 40 and 140C above liquidus. Melting was done in an induction furnace of 2 kg capacity. It was found that even a slight addition of lithium decreases the grain size of steel. For instance, the grain size of steel with 0.97% of lithium added at 120C above liquidus was 21 microns as compared with 57 microns for steel without lithium. While lithium decreases grain size, it also increases the contamination of steel and in turn has a negative effect on its properties. This can be avoided, however, by limiting the lithium content (best results obtained at 0.34%). Orig. art. has: 3 tables. [TD]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/

Card 1/1

UDC: 669.141.24:669.884

18 9100

2808

26385
S/032/61/027/008/008/020
B107/B206

AUTHORS: Braun, M. P. and Tikhonovskaya, L. D.

TITLE: Use of the secant plane method for investigating the deformation distribution in $\Sigma\text{M}726$ EI726) steel

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 8, 1961, 984-986

TEXT: The authors investigated the change of grain size and degree of deformation during forging at 1000°C. The specimens used were of heat-resistant $\Sigma\text{M}726$ EI726) steel. The dimensions of the specimens and the degree of deformation are given in a table. The specimens are of symmetrical structure, and the axis of symmetry coincides with the axis of deformation. All specimens were therefore divided into four parts along the axis, and one half was cut off from such a quarter. Polished sections were prepared from these specimens. The structure was investigated at four points: close to the surface in the center, and at a distance of one-third and two-thirds from the center. The method of secant planes was applied (Ref. 1: S. A. Saltykov, Stereometricheskaya metallografiya, Metallurgizdat (1958)). Under the effect of pressure, the total length of the grain boundaries

Card 1/7

X

Use of the secant plane method...

26385
S/032/61/027/009/008/020
B107/B206

ΣL_{tot} may be used as a criterion for the change of grain size.

$\Sigma L_{tot} = \Sigma L_{iso} + \Sigma L_{or}$. Here, ΣL_{iso} is the specific grain boundary length of the isometric part, and ΣL_{or} is the specific grain boundary length of the oriented part of the system. $\Sigma L_{iso} = 2M_{||}$ $\Sigma L_{or} = M_{\perp} - M_{||}$, where $M_{||}$ is the number of nodal points of grain boundaries of flat grains in the plane perpendicular to the axis of deformation per mm^2 of the ground section, M_{\perp} is the number of nodal points of grain boundaries of flat grains in the planes parallel to the axis of deformation. The degree of orientation μ of the grain boundaries of drawn grains is then determined by the relation: $\mu = (\Sigma L_{or} / \Sigma L_{tot}) \cdot 100\% = [(M_{\perp} - M_{||}) / (M_{\perp} + M_{||})] \cdot 100\%$.

Fig. 1 shows the relation between the degree of orientation and the distance from the specimen center. It may be seen therefrom that the orientation rises at an increased degree of deformation with an approach to the central part of the specimen. At a deformation by 15 %, the maximum degree of orientation lies at a distance of one-third from the center. At the investigated points of the longitudinal and transverse ground sections, the degree of structural deformation was determined from the following

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Use of the secant plane method...

26385

S/032/6:/027/008/008/020
B107/B206

(Institute of Casting Processes of the Academy of Sciences
UkrSSR)

X

Card 4/7

ACCESSION NR: AT4013953

S/2659/63/010/000/0207/0214

AUTHOR: Braun, M. P.; Tikhonovskaya, L. D.; Matyushenko, N. I.

TITLE: Effect of cerium and boron on the structure of cast austenitic steel

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 10, 1963, 207-214

TOPIC TAGS: steel, steel EI-695, alloy steel, cerium, boron, cast steel, cast steel structure, steel microhardness, steel carbide content, austenitic steel, tempered steel, aged steel, steel mechanical property

ABSTRACT: The authors report the results of studies on the structure and mechanical properties of cast austenitic steel EI-695 after modification with varying amounts of cerium and boron, and after tempering or aging. The alloys were prepared in a 0.5-kg high-frequency induction furnace. After casting, the steel was heated to 1150C for 10-20 hrs. and then quenched in water, followed by aging at 750C for 20 hours; X-ray analysis and tests of microhardness were performed at each stage. It was found that addition of cerium in amounts of only 0.01-0.03% disintegrated the dendritic structure of cast steel and produced a uniform microstructure, while larger amounts (0.1-0.3%) produced a grain structure similar to that of stressed steel. Boron had a similar effect, and the best results

Cord 1/3

ACCESSION NR: AT4013953

were obtained with a combination of 0.3% Ce and 0.1% B. Studies of strength and plasticity showed that these were decreased by 0.3% B, although a maximal ultimate strength (85% of that of stressed steel) was obtained with 0.08-0.18% B. Addition of Ce (0.1-0.4%) increased the strength to 80%, the relative elongation to 150% and the relative compressibility to 85% of that in stressed steel. Studies of the carbide distribution in both tempered and untempered cast steel showed only a single NbC phase, regardless of modification, but the addition of Ce and especially of B had a marked effect on the crystal lattice of the solid solution and the distribution of the carbide. Cerium displaces the carbide from the grain boundary into the center of the grain, while boron facilitates its deposition along the grain boundaries. As shown in the Enclosure, the microhardness is almost the same in the center of the grain as along the boundary after addition of Ce, while B increases the microhardness in the border zone. Addition of very small amounts of B (0.005-0.05%) leads to very high microhardness in aged cast steel. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute, AN SSSR).

SUBMITTED: 00

DATE ACQ: 27Feb64

ENCL: 01

SUB CODE: MM

NO REF SOV: 025

OTHER: 004

Card 2/3

ACCESSION NR: AT4013953

ENCLOSURE: 01

Variation in microhardness (kg/mm^2) of steel in relation to the addition of modifiers and the type of treatment

Amt. of modifier in %	cast steel		tempered steel		aged steel	
	grain boundary	grain center	grain boundary	grain center	grain boundary	grain center
no addition	330	274	250	219	335	325
0,01 Co	247	229	240	208	360	383
0,03 Co	286	248	192	146	260	276
0,10 Co	290	265	180	220	284	285
0,30 Co	293	280	159	145	304	276
0,50 Co	342	318	265	220	364	325
0,01 B	308	282	246	198	344	380
0,10 B	238	307	282	284	298	306
0,30 B	225	230	225	213	306	258
0,02 Co+0,025 B	336	281	268	224	320	376
0,3 Co+0,1 B	393	258	250	200	331	339
0,5 Co+0,03 B	323	260	283	200	365	335

Card 3/3

BRAUN, Mikhail Petrovich; VINOKUR, Bertol'd Bentsionovich; CHERNYI,
Viktor Gavrilovich; CHERNOVOL, Arkadiy Vasil'yevich; KOSTYRKO,
Oleg Stepanovich; ALEKSANDROVA, Natal'ya Pavlovna; KRUKOVSKAYA,
Galina Nikolayevna; TIKHONOVSKAYA, Larisa Dmitriyevna; LYASHENKO,
Lyudmila Aleksandrovna; FIRSEN, N.V., kand. tekhn. nauk, otv.
red.; POKROVSKAYA, Z.S., red.; KADASHEVICH, O.A., tekhn. red.

[Alloys with addition elements] Legirovannye splavy. [By] M.P.
Braun i dr. Kiev, Izd-vo AN Ukr.SSR, 1963. 142 p.

(MIRA 16:8)

(Alloys--Metallurgy)
(Foundries--Equipment and supplies)

AUTHORS: Poznyak, L.A., Zaytsev, Yu.N., and Tikhonovskiy, L.L. SOV-125-58-10-8/12

TITLE: Peculiarities of the Structure of Magnesium Cast-Iron Welds in the Electric Slag Welding Process (Osobennosti struktury svarnykh soyedineniy magniyevogo chuguna pri elektroshlakovoy svarke)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 10, pp 67 - 74 (USSR)

ABSTRACT: The authors present information on the investigation of thick magnesium cast-iron joints, carried out by electric slag welding with strip electrodes and different welding power. The tests are described in detail, and the following conclusions are made: the electric slag welding process with strip electrodes can be used in welding magnesium cast-iron if parameters of the welding technology and the electrode composition have been properly selected. It was stated that, contrary to other methods, in electric slag welding, the zone affected by heat is not subject to formation of cementite. The use of magnesium cast-iron

Card 1/2

Peculiarities of the Structure of Magnesium Cast-Iron Welds in the
Electric Slag Welding Process

SCV-125-58-10-8/12

strip electrodes ensures a proper passage of magnesium into the seam metal to form graphite of a globular shape. The method provides a satisfactory structure and necessary hardness of the seam and of the zone of thermal influence. There are 8 microphotos, 2 tables, 1 graph and 4 Soviet references.

ASSOCIATION: Institut elektrosvariki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton)

SUBMITTED: April 17, 1958

1. Cast iron-magnesium alloys--Arc welding 2. Arc welding
--Electrodes 3. Arc welding--Metallurgical effects

Card 2/2

L 20300-66 EWT(m)/EWA(d)/T/EWP(t) IJP(c) JD/DJ

ACC NR: AP6010134

SOURCE CODE: UR/0133/66/000/003/0230/0232

AUTHOR: Yefimenko, Yu. M.; Movchan, B. A.; Tikhonovskiy, A. L.

ORC: Electric Welding Institute im. Ye. O. Patona, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: Electron-beam melting and purification of ShKh15 ball-bearing steel

SOURCE: Stal', no. 3, 1966, 230-323

TOPIC TAGS: ball bearing steel, steel purification, steel melting, electron beam melting / ~~shkhes~~

ABSTRACT: Arc-melted ShKh15 ball-bearing steel was remelted in L-2 or U-143 electron-beam furnaces into 25-30 kg ingots with a diameter of 100 mm. The macrostructure of the ingots was dense and uniform; the shrinkage cavity extended to a depth of 0.2-0.3 diameter. Single or double remelting did not affect the carbon, silicon, and phosphorus contents but lowered the manganese, chromium, sulfur, oxygen, nitrogen, and hydrogen contents. After single remelting, manganese was reduced from 0.28 to 0.03-0.04%, chromium from 1.50 to 1.40-1.41%, sulfur from 0.015 to 0.006-0.008%, oxygen from 0.0040 to 0.0007-0.0010%, nitrogen from 0.0070 to 0.0011-0.0013%, and hydrogen from 0.00010

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UDC: 669.187.26.621.365.01

L 20600-66

ACC NR: AP6010134

to 0.00001—0.00004%. Double remelting had no significant effect, except for the case of sulfur, whose content dropped to 0.004. Electron-beam melting increased the steel density from 7.811 to 7.822 g/cm³ and reduced considerably the content of harmful inclusions. No carbide segregation was observed. The content of nonmetallic inclusions met the most rigid specifications. The oxides and silicate inclusions completely disappeared. The steel hardenability was not affected by electron-beam melting in spite of the almost complete removal of manganese. Orig. art. has: 4 figures.

[WW]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 4225

Card 212 BK

TIKHONOVSKIY, A.L.

Electron beam melting and refining of nickel. Avtor. svar. 17
no.8:54-59 Ag '64. (MIRA 17:11)

1. Institut elektrosvariki imeni Patona AN UkrSSR.

L 15027-65 EPA(s)-2/EAT(m)/EPT(n)-2/EAP(k)/EAP(v)/EAP(t)/EPT(c) Pr-4/Pt-10/
ACCESSION No: AP4041862

AUTHOR: Lakomskiy, V. I. (Candidate of technical sciences); Tikhonovskiy,
A. L. (Engineer)

TITLE: The evaporation of metal during electron-beam melting

SOURCE: Avtomaticheskaya svarka, no. 7, 1964, 50-53

TOPIC TAGS: electron beam melting, metal evaporation, nickel elec-
tron beam melting, electron beam power, nickel, vapor pressure, elec-
tron beam furnace

ABSTRACT: The temperature of superheating the surface layers of a
metal bath during electron-beam melting was calculated and confirmed
experimentally. Studies were made with nickel melted in an electron-
beam-melting furnace, type L-1, constructed at the Institut elektro-
svarki im. Ye. O. Patona (Electric Welding Institute). In vacuum
electron-beam melting, the evaporation rate is determined by the heat
supply, or the electron-beam power, and vapor formation. The rela-
tionship between the power of electron beam and the amount of nickel
evaporated indicates that at low beam power there is little evapor-

Card 1/3

L 15027-65
ACCESSION NR: AP4041662

ation, but when the beam power is sufficient to overcome evaporation heat losses, increasing the heat flow significantly increases the amount of metal evaporated per unit of power increase. It is believed that the thin surface layer where the beam meets the metal accepts the energy of the retarded flow of electrons and becomes superheated. The temperature of the surface layer was calculated by the Langmuir formula from data on the amount of metal evaporated and the rate of evaporation. These values are in close agreement with readings taken with a TsEPIR-010 optical pyrometer. The relationship between the calculated surface temperature and the electron-beam power shows that the greater the power, the more of it was utilized in heating the metal bath (only 4.5 kilowatts were required to heat bath from 1630 to 1690C, while 6.2 kilowatts were required for heating from 1570 to 1630C). At a power value of 17—17.4 kilowatts nearly all of it is used to melt the billet and heat the metal drops to the bath temperature. The rapid increase in metal loss in the 1630—1690C range is explained by the increase in bath temperature and the greater increase in vapor pressure of the metal vapors. Orig. art. has: 4 figures and 1 table.

Card 2/3

L 15027-65

ACCESSION NR: AP4041862

ASSOCIATION: Institut elektrosvarki im. Ye. O. Patona AN UkrSSR (In-
stitute of Electric Welding, AN UkrSSR)

SUBMITTED: 28Dec63

ENCL: 00

SUB CODE: MM

NO REF SOV: 003

OTHER: 000

ATD PRESS: 3143

Card 3/3

ACCESSION NR: AP4043206

S 0125/64/000005/0054/0059

AUTHOR: Tikhonovskiy, A. L.

TITLE: Electron-beam melting and refining of nickel

SOURCE: Avtomaticheskaya svarka, no. 8, 1964, 54-59

TOPIC TAGS: nickel, nickel purity, nickel gas content, nickel property, nickel mechanical property, nickel recrystallization temperature, nickel grain size, nickel electron beam melting, nickel vacuum arc melting

ABSTRACT: Nickel specimens of three purity grades, NO [Ni + Co at least 99.99%], NI [Ni + Co \geq 99.92%], and NP2 [Ni + Co \geq 99.5%] were remelted in an electron-beam furnace in a vacuum of 10^{-4} — 10^{-5} mm Hg. The ingots were dense and had a coarse-grained structure. The grain size varied depending on the rate of ingot pulling, from 8 mm at 120 mm/hr to 4 mm at 430 mm/hr. The gas content dropped in NP2 nickel from 4.34 cm³/100 g to 2.13 cm³/100 g. The electron-beam melting eliminated or greatly reduced not only the contents of such volatile metals as zinc, magnesium, cadmium, and manganese, but also those of

Card 1/2

L 12946-65

ACCESSION NR: AP4043206

iron, silicon, and copper, the vapour pressure of which is near that of nickel. For instance, in NP2 nickel the content of Fe, Si, and Cu decreased from 0.034, 0.096, and 0.04% to 0.018, 0.017, and 0.02%, respectively. Electron-beam melting had little or no effect on tensile strength, but greatly improved ductility; the elongation increased 4—5 times over that of vacuum-arc-melted metal. The recrystallization temperature of electron-beam melted nickel is approximately 1000 lower than that of vacuum-arc-melted nickel. The high ductility of electron-beam-melted nickel makes it possible to eliminate hot rolling. Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: Institut elektrosvar'ki im. Ye. O. Patona AN UkrSSR (Electric Welding Institute, AN UkrSSR)

SUBMITTED: 10 Nov 63

ATD PRESS: 1098

ENCL: 00

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

Card 2/2

VINOKUR, Bertol'd Bentsionovich; BRAUN, Mikhail Petrovich;
MATYUSHENKO, Nelli Ivanovna; TIKHONOVSKAYA, Larisa
Dmitriyevna; DRAYGOR, D.A., doktor tekhn. nauk, otv. red.

[Heat resistant steel; alloying, inoculation, and heat
treatment] Zharoprochnaia stal'; legirovanie, modifitsiro-
vanie i gorlachala obrabotka. Kiev, Naukova dumka, 1965.
265 p. (MIRA 18:6)

POZNYAK, L.A., kand. tekhn. nauk; ZAYTSEV, Yu.N., inzh.; TIKHONOVSKIY, A.L.,
inzh.

Special characteristics of the structure of magnesium cast iron
joints welded by the electric slag method. Avtom. svar. 11 no.10:
67-74 0 '58. (MIRA 11:12)

1. Ordena Trudovogo krasnogo Znameni Institut elektrosvarki im.
Ye.O. Patona AN USSR.
(Cast iron--Welding) (Electric welding)

TIKHONOVSKIY, H. L.

AID Nr. 988-10 12 June

ELECTRON-BEAM MELTING FURNACE (USSR)

Movchan, B. A., and A. L. Tikhonovskiy. Avtomaticheskaya svarka, no. 4,
Apr 1963, 1-6. S/125/63/000/004/001/011

The Electric Welding Institute imeni Ye. O. Paton, Ukrainian Academy of Sciences, has designed and built two laboratory-size electron-beam melting furnaces, the II-1 and II-2. In the II-1 the electron gun and the mold are mounted in a common vacuum chamber. The vacuum system has a pumping rate of 3500 to 4000 l/sec and can create a vacuum of $3 \cdot 10^{-6}$ mm Hg. The II-1 furnace operates with an accelerating voltage of 12 to 14 kv. Ingots up to 60 mm in diameter and 500 mm long of metals including refractory, such as Nb, Mo, and Zr, and their alloys can be melted. Since the electron gun is in the same chamber with the mold, the metal vapors penetrate into the cathode zone and condense on the cathode elements and high-voltage insulation, requiring frequent cleaning of insulation and replacement of cathode elements, especially

Card 1/2

AID Nr. 988-10 12 June

ELECTRON-BEAM MELTING FURNACE [Cont'd]

S/125/63/000/004/001/011

in the melting of refractory metals. This drawback has been eliminated in the E-2 furnace, which has separate vacuum chambers for the gun and mold. Only narrow slots for the passage of electron beams connect the two chambers. Each chamber has an individual vacuum system. The service life of cathodes in this furnace runs into hundreds of hours and is determined only by the evaporation rate of the tungsten filaments. Ingots 30 to 100 mm in diameter and up to 450 mm long can be obtained.

[MS]

Card 2/2

LAKOMSKIY, V.I.; SIKHONOVSKIY, A.L.

Vaporization of metal during its melting with an electron beam.
Avtom. svar. 17 no.7:50-53 J1 '64. (MIRA 17:8)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

TIKHONOVSKIY, I.D.

Devices which increase the safety of operation. *Elek. i tepl. tiaga*
4 no.2:10 P '60. (MIRA 13:6)

1. Starshiy master po rtutnym vypriamitelyam 1-go uchastka
energoosnabzheniya, Stalinskaya doroga.
(Exhaust systems) (Electric current rectifiers)

TIKHONOVSKIY, I. I:

Tikhonovskii, I. I. "The Simferopol Seismic Station of the Academy of Sciences of the U.S.S.R. Attached to the Crimean Scientific-Exploration Institute." Trudy Krymskogo Nauchno-Issled. Instituta, Simferopol, vol. 2, No. 2, 1929, pp. 15-22.

TIKHONOVSKIY, N.S.

Foliar feeding of green gooseberry cuttings. Vestsi AN BSSR. Ser.
brial. nav. no.2:123-124 '61. (MIRA 14:7)
(PLANT CUTTINGS) (FERTILIZERS AND MANURES)
(GOOSEBERRIES)

TIKHONOVSKIY, N.T.

Utilization of continuous malt crushers. Spirt.prom. 20 no.4:38
'54. (MLRA 7:12)

(Grain milling machinery)

TIKHONOVSKIY, V. I., inzh.; PUGO, A. M., inzh.

Short-delayed blasting with KZDS-58 pyrotechnic relays.
Bezop. truda v prom. 6 no.9:22-24 S '62. (MIRA 16:4)

1. Vsesoyuznyy trest po burovym i vzryvnym rabotam (for
Tikhonovskiy). 2. Gosudarstvennyy gornorudnyy kombinat Kurskoy
magnitnoy anomalii (for Pugo).

(Blasting)

TIKHONOVSKIY, V.S.

Special purpose automatic drilling machine. Stan.i instr. 33
no.9:40-41 S '62. (MIRA 15:9)
(Drilling and boring machinery)

TIKHONRAVON, N.

Tikhonravon, N. - "The power of gasoline," Illustrated by A. Orlov, Znaniye-sila,
1949, No. 2, p. 20-22

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

TIKHONRAVCH, M.I.

"Puti ispol'zovaniya luchistoi energii dlya kosmicheskogo
poleta" (Ways of utilizing radiant energy for cosmic flight), in
Reaktivnoe dvizhenie (Reactive motion), Collection No. 2, Moscow and
Leningrad, 1936.

TIKHONRAVOV, M. K.

TIKHONRAVOV, M. K.
Polet ptits i mashiny s mashushchimi kryl'iami. 2. dop. izd.
Moskva, Oborongiz, 1949. 206 p., illus.
... with flapping wings

Moskva, Oborongiz, 1949. 206 p., illus.

Bibliography: p. 201-204.

Title tr.: The flight of birds and machines with flapping wings.

TL717.T5

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

FEODOS'YEV, Vsevolod Ivanovich; SINYAREV, Gennadiy Borisovich; TIKHONRAVOV, M.K., professor, retsenznet; KALASHNIKOV, N.T., kandidat tekhnicheskikh nauk, redaktor; LOSEVA, G.F., izdatel'skiy redaktor; ZUDAKIN, I.M., tekhnicheskiiy redaktor

[Introduction to rocket engineering] Vvedenie v raketnuiu tekhniku. Moskva, Gos. izd-vo obor. promyshl., 1956. 375 p. (MLRA 9:11)
(Rockets (Aeronautics))

TIKHONRAVOV N.
Poland/Cosmochemistry. Geochemistry. Hydrochemistry

Abs Jour : Referat Zhurnal Khimiy No 6, 1957 18883

Author : Tikhonravov *N.*

Inst

Title : Geochemical and Radioactive Research

Orig Pub : Nafta (Krakow) 1955 11, No 9, 217-219

Abstract : No abstract.

Card 1/1

-3-

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755620016-8

APPROVED FOR RELEASE: 07/16/2001

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TIKHONRAVOV, N. A. Cand Tech Sci -- (diss) "On ^T~~the~~ methods of the calculation,
designing and study of the basic parameters of certain soil-cultivating
forest machines and ^{tools}~~instruments~~. "Len 1958, 17 pp (Min of Higher Education USSR.
Len Order of Lenin Forestry Engineering Acad im S. M. Kirov), 100 copies
(KL, 13-58, 98)

-76-

TIKHONRAVOV, N.A.

Methods of calculating, designing, and investigating the principal
features of tillage machinery and equipment used in forestry. Trudy
Len. lesotekh. akad. no.78:85-111 '57. (MIRA 11:10)
(Agricultural machinery)

TIKHONRAVOV, N. N.

Neft' (Petroleum), 2nd Edition, Moscow-Leningrad, 1949.

No. 444, 16 AUG 55

SOKOLOV, V.A., professor.

Stories about "black gold" ("Stories about oil" N.V. Tikhonravov.
Reviewed by V.A. Sokolov). Nauka i zhizn' 22 no. 12:61 D '55.
(Petroleum industry) (Tikhonravov, N.V.) (MLRA 9:2)

~~TIKHONRAVON, M.V.~~
SERGIYENKO, S.R.; TOPCHYEV, A.V., akademik, redaktor; ~~TIKHONRAVON, M.V.~~
redaktor; ASTAF'YEVA, G.A., tekhnicheskiiy redaktor.

[Outline of the development of the chemistry and processing of petro-
leum] Ocherk razvitiia khimii i pererabotki nefli. Moskva, Izd-vo
Akad.nauk SSSR, 1955. 309 p. (MIRA 8:4)
(Petroleum)

~~TIKHONRAVON, M.V.~~ Nikolai *Viktorovich*
Viktorovich

1891-1961 *skladnyy* - *Gen. Nefli: 1924*
12.5 No. 6, 1961
0. 61

TIKHONRAVOV, S.; LILOV, A. (Chernovtsy); SHEVCHENKO, S.

Readers report, advise, suggest.... Zhil.-kom.khoz. 12
no.11:30 N '62. (MIRA 15:11)

1. Predsedatel' ob'yedinennogo komiteta professional'nogo soyuza
rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva
Kalininskogo rayona Moskvy (for Tikhonravov). 2. Nachal'nik
planovo-ekonomicheskogo otdela Alma-Atinskogo tramvayno-trolley-
busnogo upravleniya (for Shevchenko).
(Municipal services)

TIKHONRAVOV, V. A., Engineer-Lieutenant Colonel

"Stresses in an Elastic Wheel During Rolling." Thesis for degree of Cand Technical Sci. Sub 7 Jun 50, Military Air Engineering Academy imeni Professor N. YE. Zhukovskiy.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva. Jan-Dec. 1950.

TIKHONRAVOV, V.A.; ORZHESHKOVSKIY, V.V.; SOLOV'YEVA, T.P.; SHILIAYEVA, T.I.

Protein formula of blood serum in patients with infectious nonspecific
polyarthritis and its changes during therapy. Terap. arkh. 32
no. 4:49-53 S '60. (MIRA 14:1)
(ARTHRITIS, RHEUMATOID) (BLOOD PROTEINS)

BARANOV, Yu.B.; BARANOVA, Ye.N.; BOBROVSKIY, V.I.; GRISHCHENKO, G.I.;
GONCHAR, G.V.; DOLBISH, V.S.; KALINOVSKIY V.S.; KARAKOTSKIY, Ye.D.,
KULICHKOV, G.M.; KAGANOVSKAYA, S.M.; LESTEV, A.V.; METELEIN, L.I.;
TIKHONRAVOV, V.M. [deceased]; DOLBISH, V.S., spetsred.; KUZ'MINA,
V.S., red.; KISINA, Ye.I., tekhn.red.

[Fishing equipment used in Far Eastern waters] Orudija rybolovstva
Dal'nevostochnogo Basseina. Moskva, Pishchepromizdat, 1958. 214 p.
(MIRA 11:12)

(Soviet Far East--Fishing--Equipment and supplies)

TIKHONRAVOVA, G.G.

Drying ground wood in suspension. Der. prom. 12 no.1:11-12 Ja
'63. (MIRA 16:5)

(Wood waste—Drying)

MALININ, S.N., dotsent, kand.ekon.nauk, otv.red.; LUPINOVICH, I.S., doktor sel'skokhoz.nauk, akademik, zamestitel' otv.red.; URUSOV, V.V., otv.red. po vypusku; LUKASHEV, K.I., doktor geologo-mineral.nauk, akademik, red.; AVKSENT'YEV, A.N., kand.geologo-mineral.nauk, red.; ROGOVOY, P.P., doktor sel'skokhoz.nauk, akademik, red. Sostaviteli kart: BOBYLEVA, Ye.A.; VOLKOVA, V.V.; VORONTSOVA, G.V.; MARKOVA, N.T.; TIKHONRAVOVA, Ye.V.. IL'YUSHIN, I.M., kand.filosof.nauk, red.kart; KRAVCHENKO, I.S., kand.istor.nauk, red.kart; KUPREVICH, V.P., doktor biolog.nauk, akademik, red.kart; BURZGAL, T.S., red.-kartograf; GULYUK, G.I., red.-kartograf; LEVSHINOV, A.O., red.-kartograf; MUTKOVSKAYA, M.S., red.-kartograf; SVIRSKIY, A.S., red.-kartograf

[Atlas of the White Russian Soviet Socialist Republic] Atlas Belorusskoy Sovetskoy Sotsialisticheskoy Respubliki. Minsk, Akad.nauk BSSR. Glav.upr.geodez. i kartografii MVD SSSR, 1958. XIV, 140 maps. (MIRA 12:4)

1. Predsedatel' Gosplana BSSR (for Malinin). 2. AN BSSR; prezident Akademii sel'skokhoz.nauk BSSR (for Lupinovich). 3. Direktor Minskoy kartograficheskoy fabriki (for Urusov). 4. AN BSSR; vitse-prezident AN BSSR (for Lukashev). 5. AN BSSR (for Rogovoy); 6. Chlen-korrespondent AN BSSR (for Il'yushin). 7. AN BSSR; chlen-korrespondent AN SSSR; prezident AN BSSR (for Kuprevich).
(White Russia--Maps)

15-57-5-6619

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,
p 132 (USSR)

AUTHORS: Burshteyn, S. I., Davtyan, O. K., Tikhonyuk, R. V.

TITLE: A Study of the Adsorption Properties of the Brown-Green Clays in the Odessa Deposit (Issledovaniye adsorbtsionnykh svoystv buro-zelenykh glin Odesskogo mestorozhdeniya)

PERIODICAL: Tr. Odessk. un-ta, 1956, Vol 146, ser. khim. n.,
Nr 5, pp 83-90.

ABSTRACT: The brown-green clays of the Kuchurgan deposit in the Odessa district were investigated, especially their adsorption properties and their activation. The chemical composition of these clays is (in percent) SiO_2 62.08, Al_2O_3 14.9, Fe_2O_3 5.0, CaO 6.1, MgO 0.8, SO_3 0.3, and others 6.85. The clays are beidellitic and are of the same color as the activated Zikeyevskiy trepel (tripoli). The adsorption of green beidellitic clays is similar to the adsorption of the Gumbriya clays, among the best of natural adsorbents. The brown-green

Gard 1/2

15-57-5-6619

A Study of the Adsorption Properties of the Brown-Green Clays (Cont.)

clays were activated for two hours in 30 percent sulfuric acid or in ten percent hydrochloric acid. On testing with sunflower oil this material gives a discoloration factor 20 percent greater than that for the Zikeyevskiy tripoli. These results confirm the suitability of using the Odessa brown-green clays for purifying vegetable oils.

S. P. Sh.

Card 2/2

TIKHONYUK, R.V.

USSR /Chemical Technology. Chemical Products
and Their Application

I-12

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31487

Author : Burshteyn S.I., Davtyan O.K., Tikhonyuk R.V.

Inst : Odessa University

Title : Study of Adsorption Properties of Brown-Green
Clays of the Odessa Deposit

Orig Pub: Tr. Odessk. un-ta, 1956, 146. Ser. khim. n.,
No 5, 83-90

Abstract: No abstract.

Card 1/1

Handwritten: *car*

Processes and Properties Index

Copper-ore concentration plants. A. K. Timashev and
Z. A. Tikhonravov. *Tsvetnaya Metal.* 1934, No. 8, 36
56. Statistical. S. L. Madorosky

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL CLASSIFICATION

CLASSIFICATION

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82-5

Simplest combined method of determining the nature of the fibre
in samples of finished fabrics. N. Ya. Rydchenov and O. P.
Tikhonravova (*Tekst. prom.*, 1950, No. 10, 20-25).—A simple
identification scheme is given, based on behaviour near a flame and
appearance of the ash or melt; preliminary inferences are confirmed
by microscopical examination. The scheme permits the identification
of natural silk, wool, regenerated proteins, acetate, viscose and
cuprammonium rayon, Vinyon, glass, cotton, and polyamide fibres
S. B. UVAROV.

25

CA

Simplified method of fiber determination in fabrics
N. Ya. Evdokimova and O. P. Tikhourayova. *Izhil*
Prom. 10, No. 10, 20-5(1950).—The behavior of the fiber
before ignition, the nature of its ash, and microphotography
of a cross and longitudinal section constitute this method.
Elisabeth Haralash

Тихоноцкий (V. P.). Домовой гриб, его разрушительная деятельность и меры радикальной борьбы с ним. [The house fungus, its destructive activity, and means for its effective control.]—(4) pp., 8 figs., Государств. Технич. Издат. [State Technical Publications Office], Moscow, 1929.

In the introductory part to this pamphlet the author states that in recent years the damage done by constructional wood rotting fungi, among which *Merulius lacrymans* is the most frequent and the most dangerous, has increased enormously all over Russia. In towns like Leningrad and Moscow surveys have shown that practically every house is infected, not excluding buildings of national importance, such as museums, former palaces, public schools, and the like. Of the contributory causes to this state of things mention is made of the lack of well-seasoned, sound timber for repairs and new construction, and of the overcrowding of inhabited buildings.

A detailed account is given of the conditions that predispose houses to dry rot, of the various types of destruction caused in different parts of the buildings, and of the morphology and biology of *M. lacrymans*. In a final chapter recommendations are made for the effective prevention and eradication of house fungi, and brief descriptions are given of a number of chemical fungicides now in use in Russia, together with instructions for their application.

Plants for the concentration of polymetallic ores. A.
M. Tunashev and Z. A. Tikhonovskaya. *Lavinsky Metal.*
1935, No. 1, 43 Gr.—A review of the industry in the
U. S. S. R. S. L. Madorsky

GULYAYEV, A.P.; KUZNETSOV, I.V.; TIKHONRAVOVA, T.L.; MATVEYEVA, Ye.N.,
tekhnicheskiy redaktor

[Stabilization of the dimensions of ball-bearing races by means
of cold treatment in tempering] Stabilizatsiya razmerov kolets
podshipnikov putem obrabotki kholodom pri zakalke. Moskva, Gos.
nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1952. 25 p.
[Microfilm] (MIRA 9:3)

(Ball-bearings) (Steel--Metallurgy)

TIKHOMTSEV, A.I.

Using shaped wax wire in making frames for hoop prosthesis. Stomatologia
35 no.5:53 S-O '56 (MLRA 10:4)
(DENTAL PROSTHESIS)

24-1800 1482 2607

27641
S/194/61/000/002/030/039
D216/D302

AUTHORS: Rozin, Yu.P. and Tikhonova, V.S.

TITLE: An instrument for measuring the intensity of the ultrasonic field in conducting liquids

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 2, 1961, 12, abstract 2 E96 (V sb. Primeneniye ultraakust. k issled. veshchestva, no. 11, M., 1960, 233-237)

TEXT: An ultrasonic pick-up of small dimensions is described, used for measuring the intensity of elastic vibrations in electrically conductive liquids. It consists of a double wall metal tube 3 mm diameter, inside which is placed a metallic shaft slightly shorter than the tube itself. A contact indicator is connected between the chassis and the shaft. The contact indicator is built around a 6E5C (6Ye5C) tube which has a stable gain for the contact resistance between 0 and 10^8 ohm which permits one to perform mea-

Card 1/2

27641

S/194/61/000/002/030/039

D216/D302

An instrument for measuring...

surements even in liquids with very small electrical conductivity (acetone, alcohol). When the sensing device is placed in an ultrasonic field, the liquid level in the tube rises under the influence of radiating pressure and closes the circuit shaft chassis which is registered by the indicator. The pressure in the tube is then raised by one means or another, until the indicator circuit becomes open again. The amount of pressure determines the equalizing force and consequently the intensity of the ultrasonic field at the given point. The threshold sensitivity of the instrument is 0.1 - 0.2 W/cm². There are 4 figures and 2 references. ✓

Card 2/2

TIKHONRAVOV, V. A.

(3)

✓ Hydrogen sulfide assays in human blood after taking sulfur baths. A. I. Gulin and V. A. Tikhonravov (I. V. Stalin Inst., Sochi). *Farmakol. i Toksikol.* 16, No. 6, 48-9 (1953).—Blood H_2S was detected from the 3rd min. after entering S baths contg. 200 mg./l. free and 400 mg./l. total H_2S . Blood H_2S ranged from 0.03 to 1.8 γ /l., and the varying rates of absorption are significant as to mechanism of S bath action. In the more dil. baths, up to 150 mg./l., oxidation is fast enough to keep free H_2S out of the blood; hence it hardly occurs in the usual S waters with 100-150 mg./l. Exposure to 295 mg./l., 150 min. at 38°, gave up to 0.21 γ /l. in the blood; 15 min. at 39-40.5° up to 0.1 γ /l. Julian F. Smith...

Biochem Lab.

OYVIN, I.A.; GUNINA, A.I.; TIKHONRAVOV, V.A.

Mechanism of the physiological action of hydrogen sulfide
(Matsesta) water. Vop.kur.fizioter. i lech.fiz.kul't.
no.2:13-20 Ap-Je '55; (MLRA 8:8)

1. Iz biokhimicheskoy laboratorii Bal'neologicheskogo insti-
tuta imeni Stalina i eksperimental'noy laboratorii Tsentral'-
nogo sanatoriia imeni Voroshilova (Sochi)

(MINERAL WATERS, effects,
hydrogen sulfide water, mechanism of physiol.
action)

TIKHONRAVOV, V.A.; SOLOV'YEVA, T.P.; TSVERIANISHVILI, G.K.; FILINOV, B.N.

Change in the glucoseamine content and indicators of the diphenylamine reaction in the serum of patients with rheumatic fever during treatment. Vrach. delo 4:55-58 Ap '62. (MIRA 15:5)

1. Kliniko-biokhimicheskaya laboratoriya (zav. - dotsent V.A. Tikhonravova, konsul'tant - prof. I.A. Ovin) Sochinskogo instituta kurortologii.

(GLUCOSEAMINES) (DIPHENYLAMINE) (SERUM)
(RHEUMATIC FEVER)

TIKHONRAVOV, V.A.; SOLOV'YEVA, T.P.

Serum mucoproteins in rheumatic fever and infectious nonspecific polyarthritis and their dynamics during treatment. Vop. revm. 2 no.2:8-13 Ap-Je'62 (MIRA 17:3)

1. Iz biokhimicheskoy laboratorii (zav. - dotsent V.A. Tikhonravov) Sochinskogo instituta kurortologii (dir. - zasluzhennyy deyatel' nauki prof. M.M. Shikhov).

TIKHONRAVQV, V. A.; SOLOV'YEVA, T. P.; VLADIMIROVA, Z. Ya.;
SHILYAYEVA, T. I. (Sochi)

Urinary excretion of 17-ketosteroids in rheumatism and infectious nonspecific polyarthritis during treatment with cortisone, ACTH, pyrazolidine and salicylates. Probl. endok. i gorm. 8 no.3: 82-86 My-Je '62. (MIRA 15:6)

1. Iz biokhimicheskoy laboratorii (zav. - dotsent V. A. Tikhonravov), kliniki aktivnogo revmatizma i kliniki revmatoidnykh artritov (zav. - prof. M. M. Shikhov) Sochinskogo instituta revmatizma.

(RHEUMATIC FEVER) (ARTHRITIS, RHEUMATOID)
(STEROIDS) (CHEMOTHERAPY)

TIKHONRAVOV, V.A.

Iodine test of the colloidal lability of the serum in rheumatic fever and infectious nonspecific polyarthrititis. Vrach. delo no.4: 145-146 Ap'63. (MIRA 16:7)

1. Kliniko-biokhimicheskaya laboratoriya (zav.-dotsent V.A. Tikhonravov) Sochinskogo instituta revmatizma.
(ARTHRITIS, RHEUMATOID) (RHEUMATIC FEVER)
(BLOOD PROTEINS)

TIKHONRAVOV, V.A.; SOLOV'YEVA, T.P.; FILINOV, B.N.; TSVERIANISHVILI,
G.K.

Glycoproteins of the blood serum in rheumatic fever. Vop.
revm. 1 no.3:60-64 J1-S '61. (MIRA 16:4)

1. Iz biokhimicheskoy laboratorii (zav. - dotsent V.A.
Tikhonravov, konsul'tant - prof. I.A.Oyvin) Instituta
kurortologii (dir. - zasluzhennyy deyatel' nauki prof. M.M.
Shikhov), Sochi.

(RHEUMATIC FEVER) (GLYCOPROTEINS)

ACC NR: AT6036627

SOURCE CODE: UR/0000/66/006/000/0324/0325

AUTHOR: Ratner, G. S.; Tikhonravova, N. M.; Atamanenko, A. N.; Novopashina, R. F.;
Pakhorukov, A. M.

ORG: none

TITLE: Problem of utilizing several species of higher and lower heterotrophs in a
life-support system for small closed compartments [Paper presented at the
Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny. (Problems of space
medicine); materialy konferentsii, Moscow, 1966, 324-325

TOPIC TAGS: life support system, closed ecological system, space nutrition,
space food

ABSTRACT:

Life-support systems on small spaceships will have to include a
link of heterotrophic organisms in order to supply the crew with animal
products necessary for the normal human diet. For this purpose it is
valuable to examine a series of heterotrophic organisms which can be
successfully utilized in life-support systems.

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ACC NR: AT6036627

The inclusion of various types of herbivorous and omnivorous fish (Tilapia, Hypophthalmichthys, Ctenopharyngodon, carp, and others) will make it possible to provide a more variable protein diet for humans and to utilize wastes of higher and lower plants and animals. In order to supply a man with 50 g of animal protein per diem will require 51.6 kg of Tilapia. With a fish population density of 15 g/liter of water, it is necessary to have a 3500-liter aquarium which will require approximately 112 liters of oxygen per diem.

Certain water invertebrates such as Artemia, Gammarus, and Daphnia may prove to be a valuable addition to the cosmonaut diet. These animals are readily eaten by fish and chickens. Calculations indicate that in order to get 50 g of protein per diem from Daphnia at a population density of 200 g/m³, 31.2 m³ will be required. Certain species of Gammarus may make it possible to obtain the same amount of protein from 4 m³.

Since heterotrophic organisms (birds, fishes, and others), which can be used as sources of animal protein for human nutrition in space-flight will not be able to utilize all of the wastes, and will themselves require a certain amount of animal food for their growth, it seems

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ACC NR: AT6036627

necessary to add a link of the so-called primary utilizers of organic substances. Among these should be included organisms which compose the biocenosis of activated sludge and certain terrestrial species of lower heterotrophs.

The final selection of individual species of heterotrophs for inclusion in the life-support system can be made only after prolonged experiments to determine the possibility of adaptation of organisms to the specific conditions of the spaceflight environment and the biological compatibility of the selected animals.

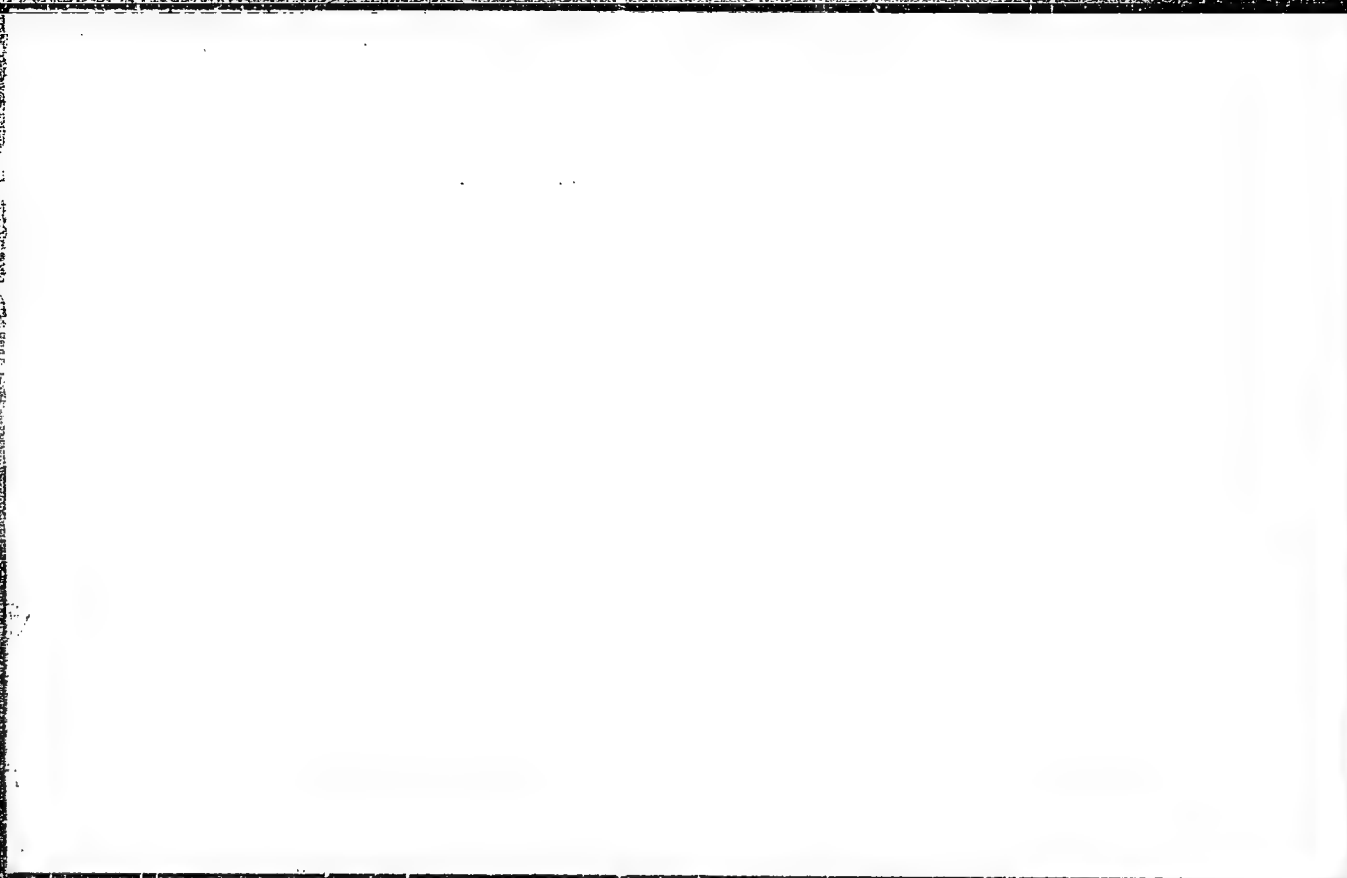
[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755620016-8"

L 35366-66

ACC NR: AR6017803

SOURCE CODE: UR/0058/66/000/001/A061/A061

38
B

AUTHOR: Tikhonyuk, A. I.; Khazanov, B. I.

TITLE: Apparatus for registration of minimum rise over the background intensity level

SOURCE: Ref. zh. Fizika, Abs. 1A521

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr. vyp. 2, 1965, 70-76

TOPIC TAGS: radiation dosimetry, pulse counting, digital computer, computer component

ABSTRACT: The authors consider the principal construction of electronic apparatus intended for registration of the minimum rise above the background level during the course of dosimetric control. The described apparatus is based on the principle of discrete counting, since it is used to register small intensity levels. Signals from the detector, following a normalization stage and gating equipment, are fed simultaneously to the inputs of the recording circuit and the system for extraction of the square root of the number of pulses. The square root extraction operation is realized during the course of a time specified by a timer device. The common timer device triggers the programmer of the summation circuit, which contains a program unit, the memory register, the transfer gates, and the pulse-count register. The operating principle of the apparatus is explained with the aid of block diagrams and electronic schematic diagrams of individual units of the instrument. A. Lebedev. [Translation of abstract]

SUB CODE: 18, 09

Card 1/1 *Lebedev*

L 04154-67 EWI(m)/I/EWP(t)/ETI -IJP(c) JD
ACC NR AR6016528 SOURCE CODE: UR/0276/65/000/012/B039/B039

AUTHOR: Kheyfets, G. N.; Yankovskiy, V. M.; Kadinova, A. S.; Shkurenko, A. A.;
Feyglin, V. N.; Tikhonyuk, A. N. 33 DB

TITLE: Determining the basic parameters for cooling of gas cylinders during jet annealing

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 12B294

REF SOURCE: Sb. Proiz-vo trub. Vyp. 15. M., Metallurgiya, 1965, 72-79

TOPIC TAGS: liquid gas container, annealing, cooling 15

ABSTRACT: A method is proposed for studying the process of jet annealing of thick-walled gas cylinders to obtain data necessary for designing jet cooling devices. An experimental laboratory installation is designed and manufactured for individual and simultaneous water-cooling of the outer and inner surfaces of a gas cylinder while it is rapidly rotated to equalize cooling along the perimeter. The schematic diagram and technical characteristics of the experimental installation are given. Practical curves are plotted for cooling along the cross section of the cylinder wall, the rate of flow of the coolant is determined and a method is found for cooling the cylinder wall at the required rate. Heat treatment conditions are established for cylinders made of 40Kh steel. The workpiece is heated to the prequenching temperature of 870°C

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UDC: 621.785.6

L 04154-67

ACC NR: AR6016528

in a batch-type furnace, held at this temperature for 40 minutes, cooled in a bilateral (inside and outside) jet cooling device, annealed at a temperature of 500°C and held at this temperature for 2 hours. It is shown that bilateral cooling gives the cylinder practically identical mechanical properties with respect to length and cross section and that these properties satisfy technical specifications. Schematic diagrams are developed for cooling devices to be used in annealing high-capacity gas cylinders. 6 illustrations, 1 table, bibliography of 3 titles. [Translation of abstract]

SUB CODE: 13

Card 2/2

KHEYFETS, G.N., kand. tekhn. nauk; YANKOVSKIY, V.M., kand. tekhn. nauk;
SORKIN, I.I., kand. tekhn. nauk; KADINOVA, A.S., inzh.; FEYGLIN,
V.N., inzh.; TIKHONYUK, A.N., inzh.; SHKURBENKO, A.A., inzh.;
KHOMENKO, A.G., inzh.

Steam hardening of high-capacity cylinders. Stal' 25 no.8:849-
852 S '65. (MIRA 18:9)

TIKHONYUK, I.

Wages of workers in planning organizations. Sots.trud.no.11:101-
103 H '56. (MLRA 10:1)

1. Starshiy inzhener-normirovshchik Giprokisloroda.
(Architecture--Designs and plans)
(Wages)

TIKHOMYUK, I.N., (g. Kiev)

Efficient use of loaders and machinery in loading and unloading.
Zhel. dor. transp. 38 no.8:76 Ag '56. (MLRA 9:10)

1. Glavnyy inzhener Kiyevskogo otdeleniya Yugo-Zapadnoy dorogi.
(Loading and unloading)

BURSHTEYN, S.I.; DAVTYAN, C.K.; TIKHONYUK, R.V.

Studying adsorptive capacity of Odessa brown-green clays.
Bent. gliny Ukr. no.2:128-135 '58. (MIRA 12:12)

1.Odesskiy gosudarstvennyy universitet.
(Odessa Province--Clay) (Adsorption)

KURZON, A.G., doktor tekhn.nauk; TKACHEV, N.M.; TIKHOPLAV, V.Yu.

Gas-turbine plants for high-speed ships of the merchant marine.
Trudy TSNIIMF 7 no.34:3-15 '61. (MIRA 14:8)
(Marine gas trubines)

TIKHOPLAV, V.Yu., inzh.

New type of gas turbine engine for seagoing vessels and
fundamentals for its application. Sudostroenie 27 no.11:19-23
N '61.

(MIRA 15:1)

(Planing hulls)
(Marine gas turbines)

ACC NR: AP5028408

SOURCE CODE: UR/0229/65/000/010/0021/0023

AUTHOR: Vashedchenko, A. N.; Tikhoplav, V. Yu.

ORG: none

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TITLE: Compensating the unloading of hydrofoil by decreasing power plant output

SOURCE: Sudostroyeniye, no. 10, 1965, 21-23

TOPIC TAGS: hydrofoil, hydrofoil lift, hydrofoil range

ABSTRACT: The continuous weight reduction (up to 30—35%) of an operating hydrofoil makes it necessary to provide means for decreasing the buoyancy of its foil system. From the foil's lift equation

$$\frac{\Delta D}{D} = \frac{\Delta C_y}{C_y} + \frac{\Delta F}{F} + 2 \frac{\Delta v_s}{v_s},$$

where D = weight, F = supporting surface, C_y = lift coefficient, and v_s = speed, it follows that the most effective means of controlling the lift of a foil system is to regularly decrease the power plant's output and, hence, the speed of the foil. In this instance, deeply submerged foils retain a constant angle of attack and a constant submersion depth and supporting surface, and thus ensure both high hydrodynamic efficiency and lift. The discussed performance, characterized by $dv_s/dt < 0$ (v_s = speed in knots; t = time in hours), provides the maximum range, in comparison with

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UDC: 629.12.039

ACC NR: AP5028408

other operating conditions, i.e., for given fuel reserve $v_s = \text{const.}$ or $dv_s/dt > 0$. Formulas are given for calculating speed, effective power plant output, and range as functions of time, lift, and the maximum duration of operation. A tabulated calculation method and two graphs are presented for determining a hydrofoil's displacement, which corresponds to a given net lift, and other parameters necessary to a hydrofoil's design. Orig. art. has: 2 figures, 1 table, and 10 formulas. [GE]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 4150

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TIKHOPLAV, V.Yu., inzh.

Efficiency of marine gas turbine plants with separate consumption
of the working medium. Sudostroenie 29 no.3:25-29 Mr '63.
(MIRA 16:4)

(Marine gas turbines)

TIKHORSKIY, K.

Contradiction between the all-Union code and regulations
on notarial agencies in Union Republics. Mor. flot²²no.6:9-10
Je '62. (MIRA 15:7)

1. Starshiy yuriskonsul't Kaspiyskogo parokhodstva.
(Maritime law)

VALDYZEV, A.S., Inzh.; VANDERSON, I.S., Inzh.; VIRIDNYI, A.I., Inzh.

Static and dynamic characteristics of the electric drives of certain mechanisms of a four-stand continuous cold rolling mill. Ser. no. NIITIAZHMASH, Graitmashzavod no. 7:51-64 '65.

(MIRA 28:10)

TIKHOTSKIY, K.G.

Several objectives of comprehensive physico-geographical training
practice. Vest. Mosk. un. Ser. 5:Geog. 18 no.2:56-58 Mr-Apr '63.
(MIRA 16:3)

1. Kafedra gidrologii Moskovskogo universiteta.
(Physical geography—Study and teaching)